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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,931	01/16/2001	Bi Le-Khac	01-2532B	4319

7590 02/25/2002

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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 02/25/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/760,931	BI LE-KHAC ET AL	
	Examiner	Art Unit	
	Tatyana Zalukaeva	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> | 6) <input type="checkbox"/> Other:  |

DETAILED ACTION

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-15 are rejected under 35 U.S.C. 102(e/a) as being anticipated by Ngano et al (U.S. 5,834,576).

Ngano discloses method for preparing comb copolymers from (meth) acrylic monomers, represented by a general formula (17) in col.21, line 60, which encompass **acrylic acid, methacrylic acid,  $\alpha$ -(hydroxymethyl) acrylic acid**, and monovalent metallic

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salts, ammonium salts, and organic amine salts thereof (col. 21, lines 61-67) and **polyether macromonomers**, such as polyethylene glycol mono (meth) acrylate, polypropylene glycol mono (meth) acrylate, and other polyether macromonomers listed in col. 22, lines 25-50).

Nagano explicitly teaches, that the solution polymerization can be performed batchwise or continuously (col.23, line 52), and a **free radical polymerization in the presence of peroxides, persulfates, azo initiators**, which is utilized in an organic solvent that dissolves the said initiators (col.24, lines 1-16). The reaction temperature is not particularly limited, but **preferably set within the range from 0 to 120°**. Polymers obtained in Nagano's invention have superior water reducing and slump maintaining ability, and are suitable used as cement dispersing agents (col.35, lines 10-15)

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This meets the limitations of the instant claims 1, 2 and 3.

With regard to claims 4 and 5 Nagano teaches that the polymerization, which can be carried out continuously is a solution polymerization, and exemplifies suitable solvents (col.23, lines 52-57). Polymerization initiators suitable for polymerization in an organic solvent are presented in col.24, lines 9-15.

3. Claims 6, 7, 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,834,576 to Nagano et al in combination with U.S. 5,310,813 to Nagasawa et al.

While disclosing a continuous process for preparation of comb polymers based on acrylate monomers and polyether macromonomers in a solvent in the presence of a

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free radical initiator and is concerned about the regulation of molecular weight (see col.35, lines 22-30) Nagano is silent about the use of chain transfer agents, mercaptanes, in particular.

Nagasawa et al (U.S. 5,310,813) discloses a process for preparation of thermosetting coating resin consisting of branched polymers, wherein branched polymer is obtained by copolymerizing a macromolecular monomer having radical-polymerizable group at one end in the molecule with another radical polymerizable monomer. (see abstract). The molecular weight of the branched copolymer can be effectively controlled by the use of chain transfer agent in combination with polymerization initiator. As the chain transfer agent there is used dodecyl mercaptan, lauryl mercaptan, thioglycolic acid, in the amount of 1-40 moles per mole of the total polymerizable components (see col.7, lines 5-12).

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Because the weight average molecular weight of Nagano's polymers should preferably be within the specific range, it would have been found obvious by one skilled in the art to utilize the mercaptan chain transfer agents utilized for branched polymers of Nagasawa in the process of Nagano, in order to limit the molecular weight to a desirable value and thus maintain good water reducing ability.

Therefore combination of references renders claims 6, 7, 11, 14 and 15 prima facie obvious and properly rejected under 35 USC 103(a).

***Response to Arguments***

4. Applicant's arguments filed 01/16/2001 with regard to previously rejected claims 1-15 have been fully considered but they are not persuasive. The crux of Applicants' arguments appears to hinge on the statement that Nagano does not teach continuous process, and that only "one phrase in 39 pages" of Nagano indicates continuous process. With all due respect to Applicants' opinion, it is maintained that Nagano **explicitly names** the continuous process, as a method to obtain the polymers (col. 23, lines 52, 53, col. 34, lines 9, 10).

With regard to the absence of specific Examples and preferred embodiments for continuous process, Applicants are reminded that disclosed examples and preferred

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embodiments do not constitute a teaching away from a **broader disclosure or nonpreferred embodiments**. *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971).

A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, **including nonpreferred embodiments**. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir.1998).

In response to Applicants arguments that Nagano fails to teach the steps of the process, it is noted that Nagano does teach the steps of the process, since the step described by Applicants, such as forming a stream .... Reads on the steps of providing monomers and initiator as per Nagano, the step of polymerization at a given

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temperature is explicitly taught by Nagano throughout the body of a Patent, and the step of "withdrawing a polymer stream..." is clearly readable on any method of isolation and /or purification of a polymer. These are basically three conventional steps of any polymerization: providing reactants, polymerizing and isolating a resulting product.

Resuming the above, a reference anticipates a claim, if it discloses the claimed invention such that a skilled artisan could take this teaching in combination with his own knowledge of the particular art and be in possession of the invention, as per *In re Graves*, 36 USPQ 2d 1697 (Fed. Cir. 1995), or *In re Sasse*, 207 USPQ 107 (CCPA 1980).

And furthermore, the disclosure in a reference must show the claimed elements arranged as in the claim, but need not be in identical words as used in the claim to

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be anticipatory. *In re Bond*, 15 USPQ 2d 1566 (Fed. Cir. 1990).


5. Additional prior art references cited in PTOL-892 show the general state of the art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (703) 308-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
TZ  
February 21, 2002

Tatyana Zalukaeva  
Examiner  
Art Unit 1713

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